Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1-40. (Canceled)

41. (Currently amended) A purified or isolated nucleic acid molecule, said nucleic acid molecule selected from the group consisting of:

(a) a nucleic acid molecule consisting of SEQ ID NO:3 **[[,]]** or the complementary sequence to SEQ ID NO:3~~, SEQ ID NO:5 or the complementary sequence to SEQ ID NO:5~~; and

(b) a nucleic acid molecule consisting of SEQ ID NO:5 or the complementary sequence to SEQ ID NO:5 ~~comprising SEQ ID NO:1 or the complementary sequence to SEQ ID NO:1, wherein said nucleic acid molecule extends at a maximum 30,000 nucleotides over the 5' and/or 3' end of the nucleic acid molecule of SEQ ID NO:1~~.

42. (Canceled)

43. (Previously presented) The nucleic acid molecule of claim 41, wherein said nucleic acid molecule is genomic DNA.

44. (Previously presented) The nucleic acid molecule of claim 43, wherein said genomic DNA is part of a gene.

45-47. (Canceled)

48. (Currently amended) A vector comprising **[[the]]** a nucleic acid molecule ~~of claim 41~~ selected from the group consisting of:

(a) a nucleic acid molecule consisting of SEQ ID NO:3 or the complementary sequence to SEQ ID NO:3; and

(b) a nucleic acid molecule consisting of SEQ ID NO:5 or the complementary sequence to SEQ ID NO:5.

49-50. (Canceled)

51. (Previously presented) An isolated host cell transformed with the vector of claim 48.

52. (Previously presented) The host cell of claim 51, wherein said host cell is selected from the group consisting of a bacterium, a yeast cell, an insect cell, a fungal cell, a mammalian cell, and a plant cell.

53-55. (Canceled)

56. (Previously presented) A diagnostic composition for diagnosing or assessing an individual's predisposition to develop adult-type hypolactasia, comprising the nucleic acid molecule of claim 77.

57-74. (Canceled)

75. (Previously presented) A kit comprising the nucleic acid molecule of claim 77.

76. (Previously presented) The nucleic acid molecule of claim 41, consisting of SEQ ID NO:3 or SEQ ID NO:5.

77. (Currently amended) A nucleic acid molecule, said nucleic acid molecule ~~**consisting of**~~ comprising a sequence of at least 14 consecutive nucleotides of SEQ ID NO:3, which includes position 324 of SEQ ID NO:3, ~~**SEQ ID NO:5,**~~ or a sequence of at least 14 consecutive nucleotides of the complementary sequence ~~**thereof**~~ to SEQ ID NO:3, which includes position 324 of the complementary sequence~~**, wherein said sequence contains the nucleotide at position 324 and wherein said nucleic acid molecule extends at a maximum**~~

~~30,000 nucleotides over the 5' and/or 3' end of the nucleic acid molecule of SEQ ID NO:3 and SEQ ID NO:5 or the complementary sequence thereof~~.

78. (Canceled)

79. (Previously presented) The nucleic acid molecule of claim 77, wherein said sequence consists of from 14 to 24 nucleotides.

80. (Previously presented) The nucleic acid molecule of claim 77, wherein said sequence comprises a detectable label.

81. (Previously presented) The nucleic acid molecule of claim 80, wherein said detectable label is a fluorescent label.

82. (Previously presented) The nucleic acid molecule of claim 80, wherein said detectable label is a radioactive label.

83-85. (Canceled)

86. (Currently amended) A kit comprising **[[the]]** a nucleic acid molecule ~~of claim 41~~ selected from the group consisting of:

(a) a nucleic acid molecule consisting of SEQ ID NO:3 or the complementary sequence to SEQ ID NO:3; and

(b) a nucleic acid molecule consisting of SEQ ID NO:5 or the complementary sequence to SEQ ID NO:5.

87. (New) The nucleic acid molecule of claim 77, wherein said nucleic acid molecule is a primer.

88. (New) The nucleic acid molecule of claim 77, wherein said nucleic acid molecule is a probe.

89. (New) A composition comprising:

(a) a first nucleic acid molecule comprising a first sequence of at least 14 consecutive nucleotides of SEQ ID NO:3, which includes position 324 of SEQ ID NO:3, or a sequence of at least 14 consecutive nucleotides of the complementary sequence to SEQ ID NO:3, which includes position 324 of the complementary sequence; and

(b) a second nucleic acid molecule comprising a second sequence of at least 14 consecutive nucleotides of SEQ ID NO:5, which includes position 324 of SEQ ID NO:5, or a sequence of at least 14 consecutive nucleotides of the complementary sequence to SEQ ID NO:5, which includes position 324 of the complementary sequence.

90. (New) The composition of claim 89, wherein each of said first and second sequences consists of from 14 to 24 nucleotides.

91. (New) The composition of claim 89, wherein each of said first and second sequences comprises a detectable label.

92. (New) The composition of claim 91, wherein said detectable label is a fluorescent label.

93. (New) The composition of claim 91, wherein said detectable label is a radioactive label.

94. (New) The composition of claim 89, wherein each of said first and second nucleic acid molecules is a primer.

95. (New) The composition of claim 89, wherein each of said first and second nucleic acid molecules is a probe.

96. (New) A kit comprising the composition of claim 89.

97. (New) A method for testing for the presence of or predisposition to adult-type hypolactasia in a subject, said method comprising:

(a) contacting a nucleic acid obtained from said subject with a composition comprising:

(i) a first probe comprising a first sequence of at least 14 consecutive nucleotides of SEQ ID NO:3, which includes position 324 of SEQ ID NO:3, or a sequence of at least 14 consecutive nucleotides of the complementary sequence to SEQ ID NO:3, which includes position 324 of the complementary sequence; and

(ii) a second probe comprising a second sequence of at least 14 consecutive nucleotides of SEQ ID NO:5, which includes position 324 of SEQ ID NO:5, or a sequence of at least 14 consecutive nucleotides of the complementary sequence to SEQ ID NO:5, which includes position 324 of the complementary sequence;

(b) detecting the presence or absence of hybridization between said first and second probes with said nucleic acid obtained from said subject; and

(c) indicating the presence of or predisposition to adult-type hypolactasia in said subject when the presence of hybridization between said second probe with said nucleic acid obtained from said subject is detected in the absence of hybridization between said first probe and said nucleic acid obtained from said subject.

98. (New) The method of claim 97, wherein said nucleic acid is obtained from a blood sample from said subject.

99. (New) The method of claim 97, wherein each of said first and second sequences consists of from 14 to 24 nucleotides.

100. (New) The method of claim 97, wherein each of said first and second sequences comprises a detectable label.

101 (New) The method of claim 100, wherein said detectable label is a fluorescent label.

102. (New) The method of claim 100, wherein said detectable label is a radioactive label.